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Our Ref.:	2590-30
Your Ref.:	09/806,831 Date: October 17, 2003

To:	Examiner Kaveh C. Kianni – Group Art Unit 2877
Firm:	U.S.Patent and Trademark Office
Facsimile No.:	(703) 308-7721
From:	Michael J. Shea

Number of Pages (including cover sheet):   3

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Debbie Phelps
FACSIMILE OPERATOR

ATTACHMENT/S: Discussion Points for Interview

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent application: Atty. Ref.:   2590-30

BEVILACQUA et al.   Group Unit: 2877

Serial No.:   09/806,831   Examiner: K. Kianni

Filed: April 5, 2001

For: METHOD AND APPARATUS FOR MEASURING   **DRAFT**
        LOCALLY AND SUPERFICIALLY THE SCATTERING
        AND ABSORPTION PROPERTIES OF TURBID MEDIA

* *

October 17, 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DISCUSSION POINTS FOR INTERVIEW

Sir:

Applicants submit the following discussion points for a personal interview with Examiner Kianni in connection with the subject patent application.

(1)   The parameter $\gamma = (1 - g_2)/(1 - g_1)$ described in the subject patent application and specified in claim 1 is a new concept and is not related to g and g' appearing in equation 13 of Wu *et al.*: $k(g')/k(g) = 1 - g'/1 - g$. Specifically, g and g' are both first order moments, whereas g_1 and g_2 are respectively the first and second order moments of the development of the phase function $p(\theta)$ in Legendre polynomials. Consequently, the parameter γ and equation 13 of Wu *et al.* are quite different. Indeed, Wu *et al.* does not mention the second order moment of the phase function. The approach of the subject application is fundamentally different and cannot be derived from Wu *et al.*'s approach.

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DRAFT

    (2)   The subject patent application discloses a system and method for determining optical characteristics such as the absorption coefficient μ_a, the reduced scattering coefficient $\mu_{s'}$ and a parameter γ from the spatially resolved reflectance $R(\rho)$. This determination involves, among other things, the dependence of the diffuse reflectance R on the distance ρ separating the source of illumination and the optical detector. This dependence of R on ρ does not at all appear in Wu *et al.* The diffuse reflectance $R(\mu_a,\mu_s,g)$ of Wu *et al.* is a value of the reflectance integrated over space and does not contain any information on its dependence on the source-detector distance ρ. Although the office action of 5/20/03 refers to the "z" described in column 8 of Wu *et al.* as the "source-detector distance," "z" actually refers to tissue depth. *See, e.g.*, col. 8, line 9-11.

Respectfully submitted,
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